

Current Research Information Systems (CRIS) as OpenAIRE Data Providers



Pablo de Castro

euroCRIS Secretary

Open Access Advocacy Librarian

University of Strathclyde

pablo.de-castro@strath.ac.uk

<http://orcid.org/0000-0001-6300-1033>

Index for today's talk

- Status of the CERIF-XML Guidelines for CRIS Managers
- Why should an institutional CRIS be interested in getting harvested by OpenAIRE?
- CRIS harvesting process
- euroCRIS Directory of Research Information Systems (DRIS)



DASHBOARD SOURCES COMPATIBILITY CONTENT METRICS

Validate your datasource

Literature Repository

Run compatibility test against the OpenAIRE literature guidelines.

Data Repository

Run compatibility test against the OpenAIRE Guidelines for Data Archives.

CRIS Systems

Run compatibility test against the OpenAIRE Guidelines for CRIS Managers based on CERIF-XML.

OpenAIRE Data Providers*



1153 OPENAIRE COMPATIBLE DATA PROVIDERS



FILTER BY

CLEAR ALL FILTERS

Filter by keywords

FILTER BY DATA PROVIDER TYPE

- ☐ Publication Repositories
- ☐ Data Repositories
- ☐ Journals
- ☒ CRIS Systems
- ☐ Publication Catalogues

- ☐ Publication Repositories Aggregators
- ☐ Data Repositories Aggregators
- ☐ Journals Aggregators

FILTER BY COMPATIBILITY LEVEL

Show 10 entries

Showing 0 to 0 of 0 entries (filtered from 1,153 total entries)

Previous Next

Name ▲ Type Country Institution Compatibility

No matching records found

Showing 0 to 0 of 0 entries (filtered from 1,153 total entries)

Previous Next

* old interface at <https://www.openaire.eu/search/data-providers#cris>

CERIF-XML Guidelines: several iterations

M.K. Elbæk, Technical University of Denmark, Lyngby

N. Houssos, EKT/NHRF, Athens

B. Jörg, Jisc, ISC, UKOLN, University of Bath, CASRAI UK

OpenAIRE Guidelines for CRIS Interoperation based on CERIF XML



EuroCRIS membership meeting, Bonn 13 – 14 May 2013

<http://hdl.handle.net/11366/150>

CRIS 2014

OpenAIRE Guidelines: supporting interoperability for Literature Repositories, Data Archives and CRIS

Pedro Príncipe^a, Najla Rettberg^b, Eloy Rodrigues^c, Mikael K. Elbæk^d,
Jochen Schirrwagen^e, Nikos Houssos^f, Lars Holm Nielsen^g, Brigitte Jörg^h

<http://hdl.handle.net/11366/321>

13th International Conference on Current Research Information Systems, CRIS2016, 9-11 June
2016, Scotland, UK

Progress in the Implementation of the OpenAIRE Guidelines for CRIS Managers

Pablo de Castro^{a*}, Jochen Schirrwagen^b, Dimitris Karaiskos^c, Jan Dvořák^d, Andrea
Bollini^e, Vasilis Bonis^c, Nikon Gasparis^f, Victoria Tsoukala^c, Paolo Manghi^g, Pedro
Príncipe^h

<http://hdl.handle.net/11366/502>

Fast forward May 2019



SEARCH

SHARE

LINK

Compatibility Level: ✕

OpenAIRE CRIS v1.1



↓ (CSV)

Results per page: 10

5 content providers, page 1 of 1

Type (1)

☐ CRIS System(5)

Compatibility Level (1)

☒ OpenAIRE CRIS v1...(5)

Country (4)

☐ NL(2)

☐ FI(1)

☐ PL(1)

☐ RS(1)

WUT Base of Knowledge

CRIS SYSTEM

OPENAIRE CRIS V1.1

Organization: [Warsaw University of Technology \(WUT\)](#)

Country: Poland

Website URL: <https://www.pw.edu.pl/engpw>

OAI-PMH URL: <https://repo.pw.edu.pl/oaicerif/OAIHandler>

Metis Radboud University

CRIS SYSTEM

OPENAIRE CRIS V1.1

Organization: [Radboud University Nijmegen](#)

Country: Netherlands

Website URL: <https://metistst.ru.nl/>

OAI-PMH URL: <https://oamemtf.uci.ru.nl/metis-oaipmh-endpoint/OAIHandler>

Fast forward May 2019

DANS (Data Archiving and Networked Services)

CRIS SYSTEM

OPENAIRE CRIS V1.1

Organization: KNAW

Country: Netherlands

Website URL: <https://dans.knaw.nl/en/>

OAI-PMH URL: <http://services.nod.dans.knaw.nl/oa-cerif>

VIRTA

CRIS SYSTEM

OPENAIRE CRIS V1.1

Organization: CSC

Country: Finland

Website URL: <https://www.csc.fi>

OAI-PMH URL: <https://dwitjutife1.csc.fi/api/cerif>

CRIS UNS (Current Research Information System University of Novi Sad)

CRIS SYSTEM

OPENAIRE CRIS V1.1

Organization: Scientific Veterinary Institute "Novi Sad"

Country: Serbia

Website URL: <https://cris.uns.ac.rs/>

OAI-PMH URL: <https://cris.uns.ac.rs/OAIHandlerOpenAIRECRIS>

So what happened in between?

Conference: CRIS2016 – St Andrews 📅

Abstract: The ambition of FRIS R3 is to take responsibility for a broader regional research information infrastructure that enables the participating Flemish research institutions, and other service users like funders and assessment entities, to uniquely identify and reuse relevant “research entities” such as researchers, organisations, projects, research output as well as other research related aspects – as well as showcasing Flemish Research. In this paper we present the motivation, development processes, technical architecture and implementation behind the new Flemish infrastructure for research information called FRIS R3. **FRIS R3 also serves as an example of a real world implementation of CERIF XML that uncovers challenges that must be addressed if CERIF XML is intended to stay relevant in commercial and large scale contexts.**

Elsevier Research Intelligence

FRIS R3 - CERIF XML in large scale exchange of research information

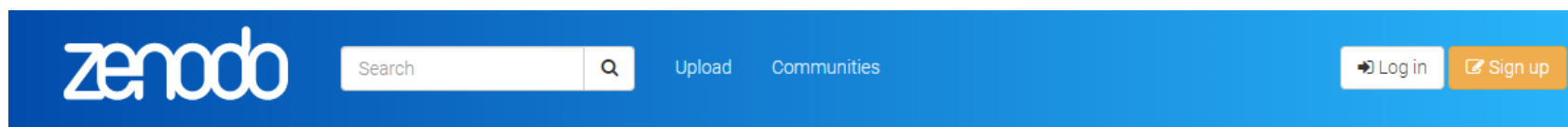
Thomas Vestdam (Atira)
Brian Plauborg (Atira)
Leen Van Campe (EWI)



Vlaanderen
is economie, wetenschap
& innovatie



So what happened in between?



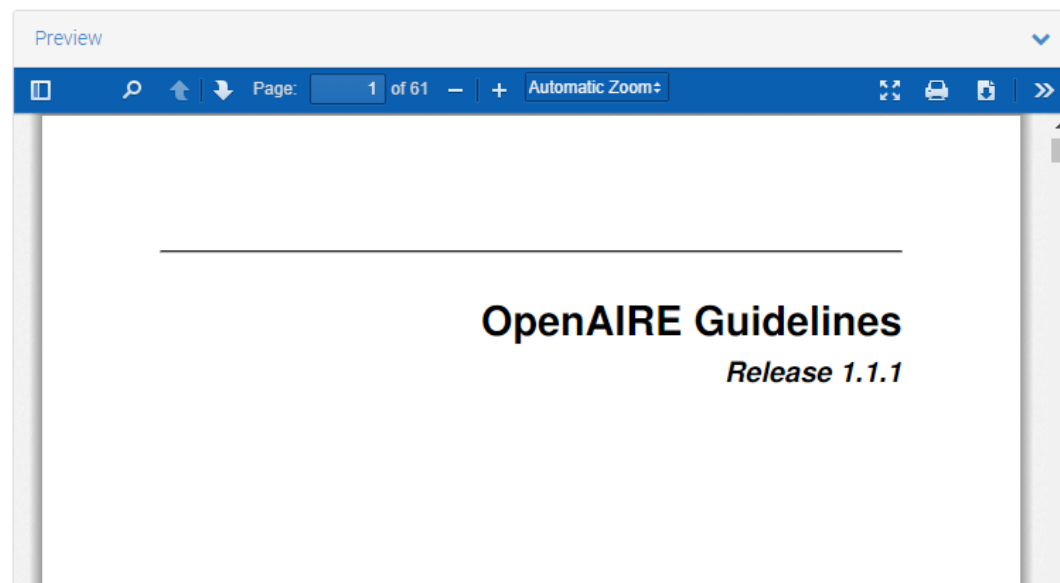
December 20, 2018

Project milestone Open Access

OpenAIRE Guidelines for CRIS Managers 1.1

Dvořák, Jan; Bollini, Andrea; Rémy, Laurent; Schirrwagen, Jochen

The Guidelines provide orientation for CRIS managers to expose their metadata in a way that is compatible with the OpenAIRE infrastructure. By implementing the Guidelines, CRIS managers support the inclusion and therefore the reuse of metadata in their systems within the OpenAIRE infrastructure. For developers of CRIS platforms, the Guidelines provide guidance to add supportive functionalities for CRIS managers and users. Exchange of information between individual CRIS systems and the OpenAIRE infrastructure is an example of point-to-point data exchange between CRIS systems, since the OpenAIRE infrastructure is itself a CRIS system.



818

views

506

downloads

[See more details...](#)

Indexed in

OpenAIRE

Publication date:

December 20, 2018

DOI:

DOI [10.5281/zenodo.2316420](https://doi.org/10.5281/zenodo.2316420)

Keyword(s):

[content aggregation](#) [OpenAIRE.eu](#)
[research information management](#)
[current research information systems](#) [CERIF](#)
[system interoperability](#)

Grants:

[European Commission:](#)

- OpenAIRE2020 - Open Access Infrastructure for Research in Europe 2020 (643410)

<https://zenodo.org/record/2316420>

So what happened in between?

METIS2OpenAIRE

This is a page for information on the **OpenAIRE-funded METIS2OpenAIRE project**. The project is running from the start of February until mid-May 2018. This page aims to collect posts on the project progress, on wider aspects related to CRIS interoperability and, *once the project comes to an end, on the further advances in making CRIS systems beyond METIS OpenAIRE-compatible*.

The following texts have been posted thus far:

- Jun 3rd, 2019: "CRIS in OpenAIRE - we take you onboard", by Pablo de Castro, METIS2OpenAIRE coordination
- Apr 30th, 2019: [Data quality issues around CRIS harvesting by OpenAIRE](#), by Pablo de Castro, METIS2OpenAIRE coordination, and Aenne Löhden, OpenAIRE/Universität Bielefeld
- Mar 1st, 2019: [First two CRIS systems test harvested by OpenAIRE \(beta service\)](#), by Pablo de Castro, METIS2OpenAIRE coordination
- Nov 30th, 2018: [CERIF-XML Guidelines for CRIS Managers start getting implemented](#), by Pablo de Castro, METIS2OpenAIRE coordination
- Jul 12th, 2018: [OpenAIRE compatibility for CRIS systems discussed at the CRIS2018 conference in Umeå](#), by Pablo de Castro, METIS2OpenAIRE coordination
- May 25th, 2018: [Test-driving the OpenAIRE CRIS Guidelines 1.1](#), by Jan Dvořák, technical lead for METIS2OpenAIRE
- May 8th, 2018: [Making the METIS CRIS at Radboud University OpenAIRE-compatible](#), by Ed Simons, METIS2OpenAIRE lead at Radboud University Nijmegen
- Feb 26th, 2018: [METIS2OpenAIRE: Adding CRIS systems to the list of OpenAIRE data providers](#), by Pablo de Castro, METIS2OpenAIRE coordination

METIS2OpenAIRE Concept

- Main aim: to make a first CRIS System OpenAIRE-compatible (METIS at Radboud University Nijmegen)
- In-house-built system chosen as allows full institutional control on dev
- To widen the project scope, further CRIS solutions included as budget-neutral partners beyond METIS: Omega-PSIR & PURE
- Project WPs include:
 - Setting up an OAI-PMH end-point on METIS
 - Building a minimally sufficient validator for CERIF-XML CRIS feeds
 - Test METIS feed against CERIF-XML Guidelines in several iterations until compliance is achieved
 - Support parallel mapping exercises by budget-neutral project partners

Where we are now



Memorandum of Understanding

Purpose

The purpose of this Memorandum of Understanding (MoU) is to establish and promote a strategic and cooperative partnership between OpenAIRE and euroCRIS.

Objective

The strategic partners will work together:

(a) To realise optimal interoperability between the central OpenAIRE system and CRISs based upon the international standard CERIF exchange format, resulting in:

- An enrichment of the OpenAIRE database with an extended set of additional contextual metadata
- A substantial extension of the kind and number of data providers to the OpenAIRE aggregation, enabling a more complete coverage of the research information domain
- The gradual addition of the research information management community to the group of parties that have a stake in OpenAIRE

Why making CRIS OpenAIRE-compliant?

- Even if the institutional repository is already OpenAIRE-compliant, it makes sense to implement the CERIF-XML Guidelines on the CRIS for the sake of the *contextual information not included in the repository items*
- Adding *National CRIS* to the range of OpenAIRE data providers may also involve significant benefits in terms of comprehensiveness, esp in countries with weaker repository networks
- Institutional in some countries (UK) are often not able to deliver their EU-funded project outputs into OpenAIRE via their repositories: having an alternative route will help with this

Contextual research information

Research output > Contribution to journal > Special issue - Pure 5.13.1-1 - Google Chrome

https://pure.strath.ac.uk/admin/editor/dk/atira/pure/api/shared/model/researchoutput/editor/contributiontojournaleditor.xhtml?id=83890318

Id: 83890318

Conundrum of γ glycine nucleation revisited: to stir or not to stir?
Research output: Contribution to journal > Special issue

Change template

EDIT

Metadata

Metrics

OVERVIEW

Relations

Fingerprints

Display

HISTORY AND COMMENTS

History and comments

NOTIFICATIONS

Editors responsible for handling this submission: pablo.de-castro@strath..., sarah.scott@strath.ac.uk, l.gilkison@strath.ac.uk, judith.smart@strath.ac.uk, jan.sefcik@strath.ac.uk, and 9 others

Relations

Research Outputs

Activities

Prizes

Projects

Future Continuous Manufacturing and Advanced Crystallisation Research Hub (CMAC Hub) Edit —
Project: Research

Impact

Datasets

Data for: "Conundrum of gamma glycine nucleation revisited: to stir or not to stir" —
Dataset

Facilities/Equipment

Student thesis

Visibility

Public - No restriction

Last saved: 21/02/19 10:12

Status: Validated

Save

This may include information on:

- Affiliations
- Funded projects
- Associated datasets
- Research equipment/facilities

euroCRIS: promoting the use of CERIF



Mission

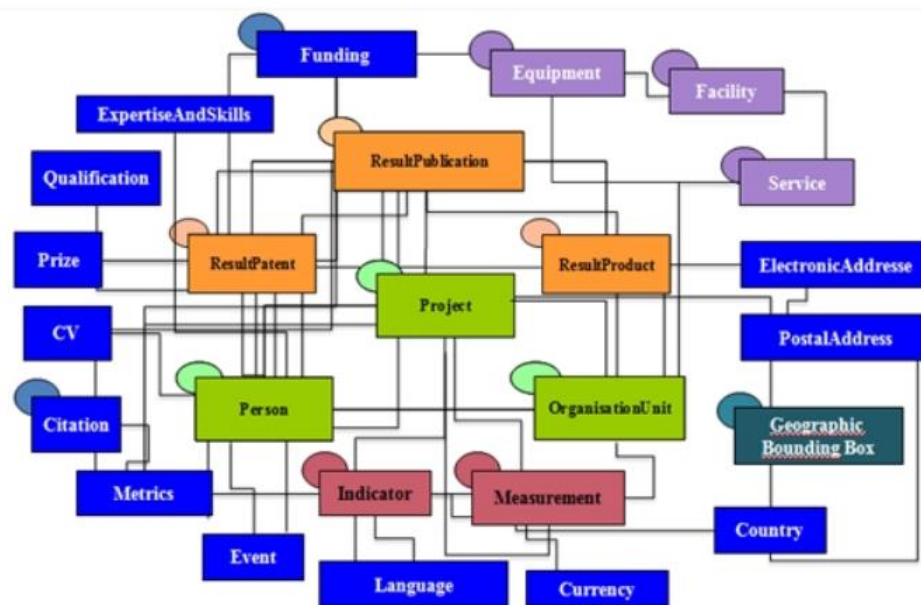
"To promote collaboration within the research information community and advance interoperability through CERIF"



Main features of CERIF

CERIF (the Common European Research Information Format) is:

- A concept about research entities and their relationships – Specification (Conceptual Level)
- A description of research entities and their relationships – Model (Logical Level)
- A formalization of research entities and their relationships – Database Scripts (Physical Level)



System interoperability a key concept for Open Science implementation



ABOUT EVENTS FUNDING IWC NEWS PUBLICATIONS RESOURCES

WheatVIVO

The Wheat Initiative is developing an open-access web portal that aims to provide information regarding wheat researchers and international projects.

The WheatVIVO portal will facilitate access to information concerning researchers and research projects amongst the global public-private wheat community. This web portal will be a useful tool for researchers to search for partners in order to develop collaborations. WheatVIVO can also be used by students and post-docs to identify labs in which they would like to work, as well as by policy makers and funding agencies to better understand research priorities in different countries.

Open Science implementation gradually moving onto subject-specific approaches



First BE OPEN Event - Open Science in Transport at ETC2019

11.10 2019

[Add to calendar](#)

47th European Transport Conference (ETC 2019)
Dublin Castle, Dublin, Ireland

This is the first workshop of the project which will be organized in relation to the activities of WP1 "Open Science framework and stakeholders views" and WP2 "Mapping of existing Open Science sources in transport".

We are looking forward to engaging stakeholders into the discussion around the Open Science in Transport, and more particularly around the terminology for Open Science understanding and around the needs of the different modes of transport regarding Open Science in Transport.

<https://beopen-project.eu/events/open-science-session>

Mapping available RIM infrastructure: the DRIS

Browse

Search the Directory of Research Information System (DRIS)

Name

All

AND

Country

All

AND

Scope

All

+

Coverage

Reset


Search

Discover


Country	Software	Status
Italy73	Pure94	Operational331
United Kingdom68	IRIS70	Under Construction ...14
India50	IRINS50	
Germany25	In-house-built43	
Poland22	Omega-PSIR20	
Spain20	Symplectic Elements19	
Netherlands14	Converis10	

DRIS entry

Research Object OMEGA-PSIR@WUT

 View Statistics

 Email Alert

 RSS Feed

Information

Details

Name of the CRIS OMEGA-PSIR@WUT **Acronym** OMEGA-PSIR@WUT

Description

OMEGA-PSIR@WUT is the fully functional CRIS operated at the Warsaw University of Technology (WUT). It provides the University Management with a complete view of research achievements of the University, and reports the achievements to the national authorities. It also functions as Institutional Repository, making it possible to archive full-texts, and provides access directly to the users. It is compliant with the OAI-PMH protocol. The system grants end-users access to the files according to the copyright permissions and the users' privileges. For example, for an authorized user a publication can be provided directly from the system, otherwise the system directs the user to the publisher site.

Status In Operation **Scope** University **Date of establishment** 02-01-2013 **URI** <http://repo.bg.pw.edu.pl/index.php/en/>

Number of users 4300 **Annual number of DB requests** 860,000 **Software** Commercial/In-house software

CERIF-Compatibility CERIF wrapped: Non-CERIF storage model but CERIF interface (query and reporting) **CERIF-version** CERIF-1.4

Coverage

- Projects
- Persons (researchers)
- Organisations (Institutes, Departments...)
- Publications
- Products (resulting from research: e.g. software, video, audio)
- Awards / Prizes (local, national, international)
- Patents
- Events (e.g. conferences, seminars...)
- Facilities (e.g. large laser laboratory)
- Equipment (e.g. x-ray spectrometer)
- Services (as outcome of research or linked to research)
- Person CV
- Person skills

Links to systems within the institution

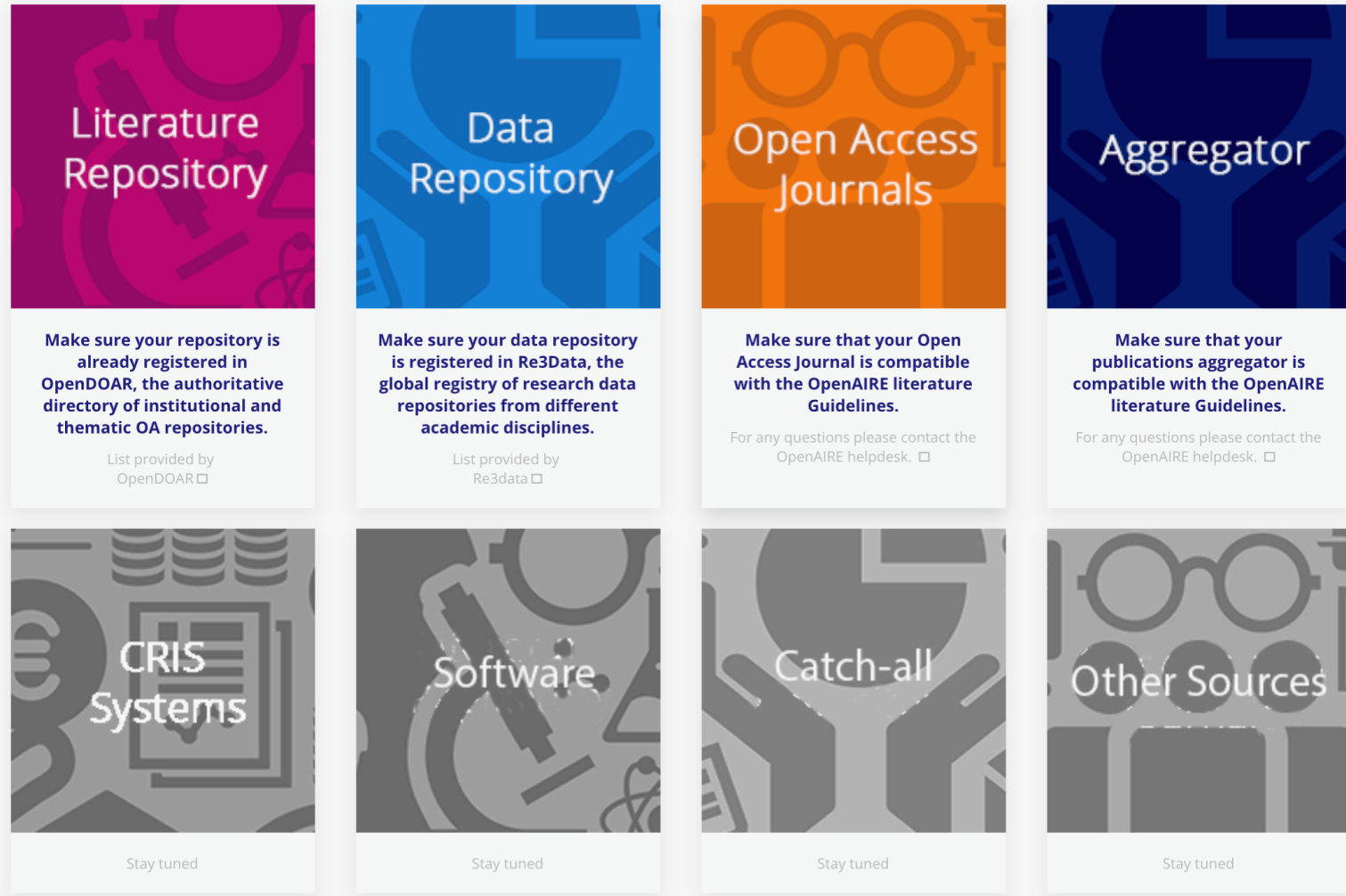
- Institutional Repository
- HRM-System
- Financial System
- Library System
- SIS (Student Information System)

Links to external systems outside the institution CRIS of other Institutions

<https://dspacecris.eurocris.org/cris/driscris00977>

How CRIS harvesting is meant to work

Register your datasource



Screenshot courtesy of Antonis Lempesis, OpenAIRE at Athena Research Centre, Athens

How CRIS harvesting is meant to work

Register your datasource



Please make sure your repository is registered in [OpenDOAR](#).

Last Updated: 2019-05-27

Select repository's country

Finland

Start typing in the name of your repository to narrow down the view

OpenDOAR Repositories in Finland

- ☒ Aaltodoc Publication Archive Registered [↗](#)
- ☐ DHanken [↗](#)
- ☐ E-thesis - Electronic Publications at the University of Helsinki [↗](#)
- ☐ Helsingin yliopiston digitaalinen arkisto [↗](#)
- ☐ Jukuri [↗](#)

First step: exposing CRIS metadata feed

Suggested feature implementation sequence

0. An empty, but compliant OAI endpoint (Service)
1. Your institution and its organisational structure (OrgUnits)
2. Your academic staff with affiliations to your departments (Persons, OrgUnits)
3. The funders you have met (OrgUnits)
4. Funding programmes, incl. the links to their funders (Funding, OrgUnits)
5. Equipment
6. Projects
7. Journals your staff has published in (Publications)
8. Your staff's journal articles (Publications)
9. Proceedings, conferences (Publications, Events)
10. Your staff's other publication outputs (Publications)
11. Datasets, software, websites, videos and other outputs (Products)
12. Patents

First step: exposing CRIS metadata feed

Make sure you only expose public information

Do not show:

- Project proposals
- Contractual research projects
- Metadata of internal documents and non-disclosable outputs
- Persons who exercised their right to be forgotten
 - or some other opt-out

=> Do not show what you wouldn't put on your institution's public website! <=

Test harvesting & data quality analysis

Diagnostic findings of CRIS metadata

- Abstracts, subjects often not given, subjects not based on thesauri.
- Language attribution missing, undeclared, or wrong for titles, abstracts, subjects.
- Resource types frequently too unspecific (other or text).
- Reviews lacking explicit specification of reviewed item (as prose in title).

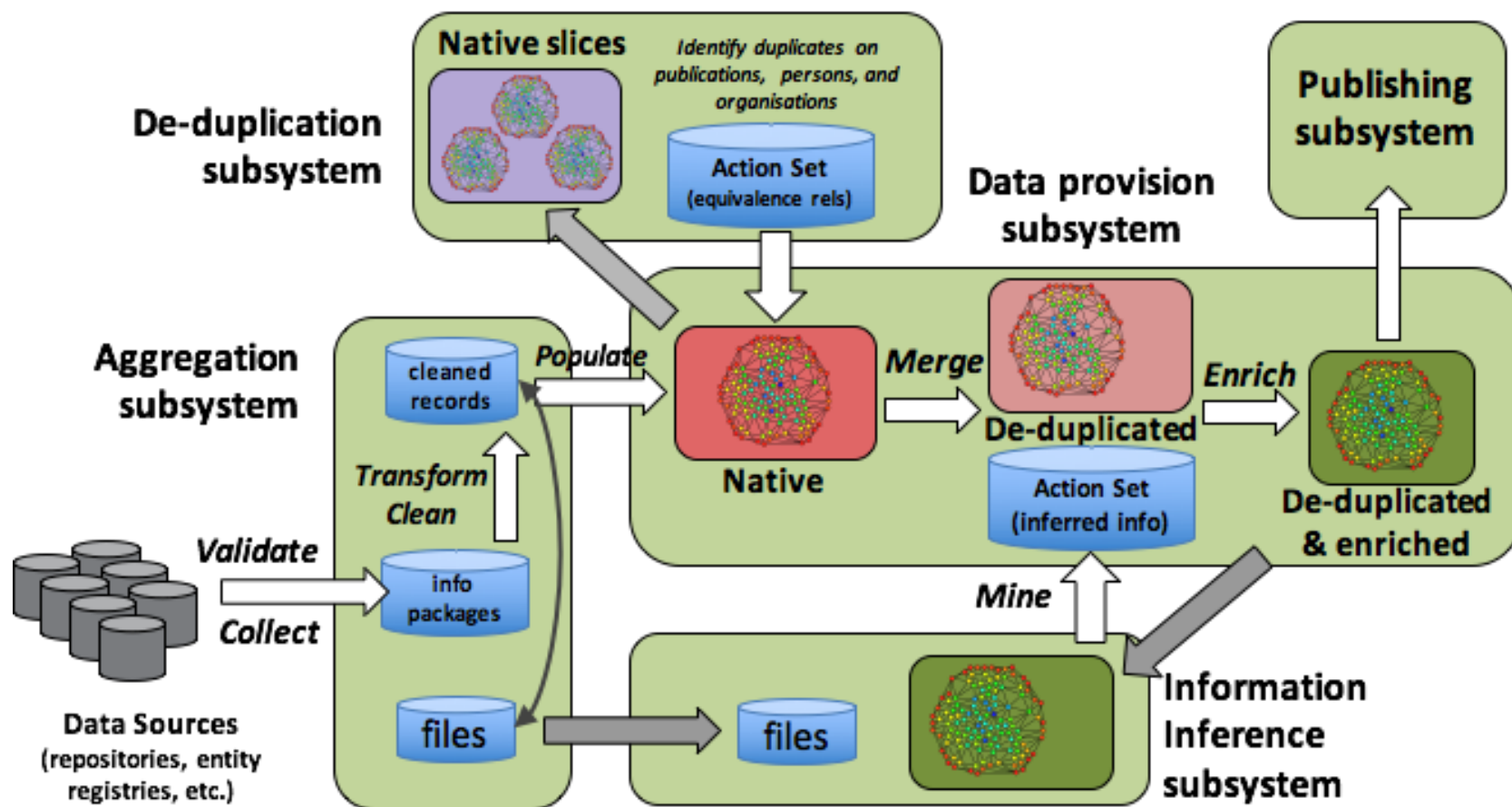
What is the described item about?

- Author names quite differently formatted and sometimes lacking IDs.
- Container publication (journal, book) without IDs (ISSNs, ISBNs).

Where does it stem from?



OpenAIRE aggregation pipeline



Some conclusions

- CRIS harvesting highly relevant for OpenAIRE and for Open Science implementation
- Including CRIS as data providers for Literature Broker Service offers interesting opportunities in the area of contextual metadata
- Still at an early stage with just a few early adopters of the CERIF-XML Guidelines for CRIS Managers (but it's going to get much bigger soon)
- CRIS 'vendors' (incl 4Science) interested in offering this as a service to their customers will mean a key driver



Realizing the implementation of the OpenAIRE-CRIS-CERIF Guidelines in DSpace-CRIS

📁 infrastructure services & data, scholarly communication 👤 Andreas Czerniak 🕒 Monday, 20 May 2019

👁 915 Hits



Supported by OpenAIRE, 4Science will implement the most recent version of the [OpenAIRE Guidelines for CRIS Managers](#) in the open source software [DSpace-CRIS](#) which extends the DSpace repository platform by research data and information management.

Thanks!

Questions?